

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Claims 1-36 are amended.

Claim 37 is new.

Listing of Claims:

1. (Currently Amended) Method for controlling a direct current motor (~~30~~) in one or several fan units (~~43, 20, 21~~), each comprising a fan, which method comprises:
generation of a control signal from a first control unit (~~22~~) which is external in relation to the said fan unit (~~43, 20, 21~~);
transmission of the said control signal to the said fan unit (~~43, 20, 21~~);
reception of the transmitted control signal in the said fan unit (~~43, 20, 21~~);
interpretation of the said control signal in a second control unit (~~26~~) which is arranged in association with the said fan unit (~~43, 20, 21~~); and
generation, in the said second control unit (~~26~~), of a supply signal for the said direct current motor (~~30~~), on the basis of the control signal generated by the first control unit (~~22~~) and received in the fan unit and on the basis of a supply voltage; ~~characterized in that~~ wherein the method further comprises:
transmission of the control signal together with the supply voltage over a shared communication link (~~44~~), with the control signal being superposed on the supply voltage.
2. (Currently Amended) Method according to claim 1, ~~characterized in that~~ wherein serial communication is used for transmitting the said control signal to the said fan unit (~~43, 20, 21~~).
3. (Currently Amended) Method according to ~~claim 1 or 2, characterized in that~~ claim 1, wherein the said control signal is a binary data signal.

4. (Currently Amended) Method according to claim 3, ~~characterized in that~~ wherein the said control signal constitutes a measurement of a certain required proportion of the maximal output of the said direct current motor (30) or a certain required speed of rotation of the direct current motor's (30) fan.
5. (Currently Amended) Method according to ~~any one of the preceding claims,~~ ~~characterized in that~~ claim 1, wherein the said fan unit (43, 20, 21) is used for ventilation of a vehicle seat (1).
6. (Currently Amended) Method according to ~~any one of the preceding claims,~~ ~~characterized in that~~ claim 1, wherein pulse width modulation (PWM) is used for controlling the said direct current motor (30).
7. (Currently Amended) Method according to claim 6, ~~characterized in that~~ wherein the pulse frequency of the said pulse width modulated supply is varied in response to a detected speed of rotation of the said direct current motor (30).
8. (Currently Amended) Method according to ~~claim 6 or 7, characterized in that~~ claim 6, wherein the pulse frequency of the said pulse width modulated supply is equal to or a whole-number multiple or a whole-number fraction of the detected speed of rotation.
9. (Currently Amended) Method according to ~~any one of the preceding claims,~~ ~~characterized in that~~ claim 1, wherein information is communicated from the fan unit (43, 20, 21) to the first control unit (22).
10. (Currently Amended) Method according to claim 9, ~~characterized in that~~ wherein the said information is communicated via the windings of the direct current motor comprised in the fan unit (43, 20, 21).

11. (Currently Amended) Method according to claim 10, ~~characterized in that~~ wherein it comprises generation of current pulses in a predetermined pattern in the windings of the direct current motor, which pattern corresponds to certain information.

12. (Currently Amended) Method according to ~~any one of claims 9-11, characterized in that~~ claim 9, wherein the said information comprises data relating to operating state, fault diagnosis or identification information relating to the fan unit (43, 20, 21).

13. (Currently Amended) Method according to ~~any one of the preceding claims, characterized in that~~ claim 1, wherein each fan unit (43, 20, 21) is provided with an identity to make it possible to transmit information between the first control unit (22) and one of several fan units (43, 20, 21).

14. (Currently Amended) Method according to claim 13, ~~characterized in that~~ wherein it comprises coding of the said control signal in a way such that it reflects information about the said identity.

15. (Currently Amended) Method according to ~~any one of the preceding claims, characterized in that~~ claim 1, wherein the first control unit (22) regulates both the fan unit(s) (43, 20, 21) and the heating element(s) (39, 40).

16. (Currently Amended) Arrangement for controlling a direct current motor (30) in a fan unit (43, 20, 21), which arrangement comprises:

a first control unit (22) that is external in relation to the said fan unit (43, 20, 21);

a communication link (44) between the said first control unit (22) and the said fan unit (43, 20, 21);

a second control unit (26) arranged in association with the said fan unit (43, 20, 21) and arranged to generate a supply signal for the said direct current motor (30) on the basis of a control signal generated by the first control unit (22) and transmitted via the said communication link (44) and on the basis of a supply voltage;

~~characterized in that~~ wherein the communication link (44) is arranged to transmit the supply voltage together with the said control signal.

17. (Currently Amended) Arrangement according to claim 16, ~~characterized in that~~ wherein the said communication link (44) is also arranged for serial communication.

18. (Currently Amended) Arrangement according to ~~claim 16 or 17, characterized in that~~ claim 16, wherein the said control signal is a binary data signal.

19. (Currently Amended) Arrangement according to ~~any one of claims 16-18, characterized in that~~ claim 16, wherein the said fan unit (43, 20, 21) is arranged for ventilation of vehicle seats (1).

20. (Currently Amended) Arrangement according to ~~any one of claims 16-19, characterized in that~~ claim 16, wherein the said fan unit (43, 20, 21) also comprises means (17, 19, 38) for detecting speed of rotation.

21. (Currently Amended) Arrangement according to ~~any one of claims 16-20, characterized in that~~ claim 16, wherein the said fan unit is arranged for control of the speed of rotation of the direct current motor (30) by means of pulse width modulation.

22. (Currently Amended) Arrangement according to ~~any one of claims 16-21, characterized in that~~ claim 16, wherein the said second control unit (26) is arranged internally in relation to the said fan unit (43, 20, 21).

23. (Currently Amended) Arrangement according to ~~any one of claims 16-22, characterized in that~~ claim 16, wherein it comprises at least two fan units (43, 20, 21) that are connected either in series or in parallel.

24. (Currently Amended) Arrangement according to ~~any one of claims 16-23, characterized in that~~ claim 16, wherein it comprises a circuit with a diode (32) and a

capacitor (33) that are utilized when supplying the said control signal to the direct current motor (30) while the supply voltage to the direct current motor (30) is maintained.

25. (Currently Amended) Method for controlling a direct current motor (30) for a fan (8) arranged for ventilation of a vehicle seat (1), ~~characterized in that~~ wherein the method comprises controlling the speed of rotation or the output of the said direct current motor (30).

26. (Currently Amended) Method according to claim 25, ~~characterized in that~~ wherein pulse width modulation (~~PWM~~) is used for the said control of the direct current motor (30).

27. (Currently Amended) Method according to ~~any one of claims 25 or 26,~~ claim 25, wherein the pulse frequency of the said pulse width modulated supply is varied in response to the detected speed of rotation.

28. (Currently Amended) Method according to ~~any one of claims 25-27,~~ claim 25, wherein the second control unit (26) generates an additional pulse width modulated signal intended for supplying the windings of the direct current motor (30).

29. (Currently Amended) Method according to claim 28, ~~characterized in that~~ wherein the said additional pulse width modulated signal is variable.

30. (Currently Amended) Arrangement for ventilating a vehicle seat, which arrangement comprises a fan (8), a direct current motor (16, 30) and a control unit (10, 22), ~~characterized in that~~ wherein the said control unit (10, 22) is arranged to control the speed of rotation of the said direct current motor (16, 30).

31. (Currently Amended) Arrangement according to claim 30, ~~characterized in that~~ wherein the said speed of rotation is controlled by the said control unit (10, 22) in response to external stimuli.

32. (Currently Amended) Arrangement according to claim 31, ~~characterized in that~~ wherein the said external stimuli consist of the output signal from a temperature detector (9, 42) arranged in the vehicle seat (1).

33. (Currently Amended) Arrangement according to ~~any one of claims 30-32,~~ ~~characterized in that~~ claim 30, wherein the said control of the speed of rotation of the direct current motor is carried out by means of a pulse width modulated supply.

34. (Currently Amended) Vehicle seat (1) ~~characterized in that~~ wherein it is equipped with an arrangement according to ~~any one of claims 16-24 or 30-34~~ claim 16.

35. (Currently Amended) Method for diagnosis and control of a direct current motor (30) in a fan unit (43, 20, 21) with a fan, which method comprises:
a control unit (26) arranged in association with the said direct current motor (30) for controlling the speed of rotation or output of the said direct current motor (30), with
a supply signal for the said direct current motor (30) being received in the said control unit;
~~characterized in that~~ wherein the method comprises;
generation of a diagnostics signal from the control unit (26) arranged in association with the said direct current motor (30); and transmission of the said diagnostics signal to an additional control unit (22) which is external in relation to the said fan unit (43, 20, 21).

36. (Currently Amended) Method according to claim 35, ~~characterized in that~~ wherein the said diagnostics signal is transmitted in the form of a predetermined pattern in the current that is supplied to the windings of the said direct current motor (30).

37. (New) Vehicle seat wherein it is equipped with an arrangement according to claim 30.